



## Sustainability Assessment

**Business Name** Frisco Nordic Center  
**Business Category** Recreation  
**Street Address** 616 Recreation Way, Frisco CO  
**Mailing Address** PO Box 4100, Frisco CO  
**Green Champion** Nora Gilbertson  
**GC email** [NoraG@townoffrisco.com](mailto:NoraG@townoffrisco.com)

**Notes:** For the past few years, the Nordic Center was operated by a concessionaire. The Town of Frisco took over management in 2016. While the building is small, there are a few improvements that will go a long way in improving the overall sustainability of its operations.

### Top recommendations:

1. Perform targeting air sealing in locations with identified air leaks
2. Replace existing lights with LED fixtures
3. Install a programmable thermostat
4. Design and utilize consistent recycling signage with pictures that demonstrate what is and is not recyclable. Post these at all trash and recycling locations. Periodically meet with staff to offer refresher courses in proper recycling
5. Review all paper products purchased for the Nordic Center and ensure that all contain recycled content or are made from renewable resources
6. Compost coffee grounds and wooden stir sticks
7. Create signage to engage and educate guests about the sustainability practices in the building and in town
8. Use third-party certified cleaning products for general cleaning

### Program Requirements:



- ✔ Complete on-site sustainability assessment, including energy and lighting audit.
- ✔ Recycle newspaper, magazines, office paper, cardboard and co-mingled containers (plastic, glass aluminum).
- ✔ Educate your staff and customers about your environmental efforts and commitment.
- ✔ Display Frisco Clean Tracks decal.
- ✔ Identify and accomplish at least one new sustainable action that your business will achieve this year.


For HC3 Energy Audit Staff to complete

Built Environment - Energy		
0		Use of occupancy sensors or timers where appropriate. 2 POINTS  <i>These are relatively inexpensive to install and the rebate for a wall mount occupancy sensor from Xcel is \$30/sensor. A good rule of thumb is that each wall mount sensor will save you \$10 annually.</i>
2		Replace less efficient lighting with more efficient lighting. Points will be based on the percentage of lighting that is energy efficient. 10 POINTS  <i>For Xcel lighting rebates and coaching:            Allyson Calderon   Customer Service Representative</i>

		<p><i>CLEAResult</i>  <i>Implementing the Xcel Energy Small Business Lighting Program</i>  600 17<sup>th</sup> St. Box38 Suite 400  Denver, CO 80202  (720) 548-1160 ext. 1807 Phone   (720) 636-8396 Fax  </p>
N		Replace incandescent or halogen lights with more efficient bulbs (LED).
N		Replace older (T-12-type, magnetic ballast) fluorescents with more efficient fluorescents (T8 or T5, electronic ballast).
0		Install programmable thermostats to maximize heating and cooling efficiency. 2 POINTS
1		Turn down water heater thermostats to 120 degrees F. 1 POINT
10		When heating or cooling, do not prop doors open (if recommended in audit as energy priority). 10 POINTS
3		Install/maintain appropriate insulation (in attic, walls). Points will be assigned as a percentage of completed insulation. Example: 20% of all wall cavities including attic = 1 point. 5 POINTS
0		Install/maintain appropriate air sealing (caulk/sealing/weather stripping around windows and doors; sealing around connections to unconditioned space, especially high and low in building). Points will be assigned as a percentage of completed air sealing. 5 POINTS
4		Restore historic windows. 5 POINTS
5		Purchase Energy Star computers, monitors, printers, and other commercial appliances. 5 POINTS
1		Minimize phantom load with smart strips. 1 POINT
5		Upgrade mechanical equipment to high efficiency models. 92% Annual Fuel Utilization Efficiency (AFUE) or better. 10 POINTS (15 POINTS for hotels, lodges and property management companies)
<b>Water Conservation</b>		
0		<p>Use water conservation policies like installing low-flow fixtures on faucets/shower heads, replace old toilets with new low-flush toilets, or improve efficiency of existing toilets. 2 POINTS (5 POINTS for hotels, lodges and property management companies)</p> <p><b>Toilets are standard 1.6 gallons/flush. Restroom sinks do not have aerators.</b></p>
0		<p>Communication of water conservation message. 2 POINTS.</p> <p><b>No water conservation messaging posted. Post signs to remind guests of water conservation strategies in the restrooms. What about the snowmaking equipment? Is it designed to be water efficient? Post information so guests can read about your own water conservation efforts.</b></p>
NA		Install an auto shut-off device for sprinkler system. 2 POINTS
NA		Set sprinkler system so that it runs outside the hours of 10 a.m. to 4 p.m. 2 POINTS
<b>Good Neighbor policy</b>		
3		<p>Business is invested and involved in local community. Examples include donating time or money to local charities, encouraging employees to volunteer, offering training/workshops to employees or other businesses in the industry on best practices regarding social and environmental responsibility, and/or social activism efforts to bring about changes in the industry that will benefit the environment. 3 POINTS</p> <p><b>The Town of Frisco offers grants to local organizations. Its Wellness Program includes volunteering as one of its challenge activities.</b></p>
<b>Sustainability Policy, Action Plan and/or Report</b>		
3		<p>Sustainability policy and/or action plan for monitoring the company's sustainability performance. Should identify the company's vision, sustainability objectives/goals, and is focused on continual improvement. 3 POINTS</p> <p>Policy or Plan should address at a minimum:</p>

		a) business planning b) workplace practices c) employee engagement d) environmental management e) supply chain management f) community and ecosystem impacts g) customer communications h) sector specific best practices  <b>Clean Tracks is the towns official sustainability platform. However, Clean Tracks should be updated to reflect actions accomplished 2009 – 2012 and provide a new set of next steps. Currently, the Town includes environmental messaging in its hiring paperwork. The Town also has a purchasing policy. An updated Clean Tracks program should define goals and strategies for each town property.</b>
<b>Guest and Employee Education</b>		
0		The company educates both customers and employees about the sustainability initiatives of the business. For example, the business provides training/literature on proper recycling and the importance of conserving water and energy. When guests arrive, the company informs customers about their sustainability efforts. 3 POINTS  <b>At the Nordic Center, it would be a good idea to educate visitors (via signage) about the conservation ethic of the Town to let them know that these are values held by the town (create a social norm). It's also a good idea to include information on the Town of Frisco website talking about the sustainability measures practiced at the Nordic Center.</b>
<b>Green Team</b>		
2		Establish a green team (for small businesses may be one or two people). 2 POINTS <b>TOF has a green team. There is a representative from the Day Lodge on the team, and the Day Lodge has oversight over the Nordic Center.</b>
<b>Transportation</b>		
NA		Company uses vehicles that are hybrid/electric, get 40 mpg or above or runs on alternative fuel. 10-15 POINTS (for businesses that have 1 to 5 vehicles - 10 POINTS) (for businesses that have 10 or more vehicles - 15 POINTS) <b>The Nordic Center doesn't have its own department vehicle.</b>
6		Participation in Green Commutes program and/or provide incentives for alternate commuting, flexible work arrangements, alternative transportation, walking or biking. 6 POINTS <b>TOF's Got Gas? Program should be considered a model for our community.</b>
0		Create a vehicle purchase plan that includes improvements to fuel efficiency or delivery reduction plan which limits the number of deliveries made and received. 2 POINTS (8 POINTS for companies that make deliveries)
NA		(Restaurants) Purchase and use local food. (Retail) Purchase retail items from local or fair-trade manufacturers. 7 POINTS
<b>Waste Reduction</b>		
0		Recycle newspaper, magazines, office paper, cardboard and co-mingled containers (plastic, glass, aluminum). 5 POINTS  <b>Theoretically, all accepted materials are collected for recycling. However, the guest-facing bin lacks good signage and was full of contamination when we visited. There is a second employee-only recycling bin behind the desk. This was not contaminated, but also lacked signage.</b> <b>0</b>

		<p><b>Because contamination from guests is a problem, it's important to have signs that show not only what is garbage, but also what should go in the recycling bin.</b></p>
3		<p>Purchase unbleached, post-consumer recycled paper and other paper products. 5 POINTS</p> <p><b>Paper towels and tissues contain recycled content. I couldn't locate a roll of toilet paper to verify what's used. Office paper does not contain recycled content. Staples sell recycled-content paper. A good place to start is to look for paper containing 30% recycled-content.</b></p> <p>Staples 30% Recycled Copy Paper, 8 1/2" x 11", Case</p> <div><div><div>Item: 492072    Model: 112350/461757    ★★★★★ (220)   <a href="#">Write a Review</a></div><div></div><div><p><b>Product Details</b></p><ul style="list-style-type: none"><li>• 8.5" x 11"</li><li>• 20-pound weight provides strength and durability</li><li>• 92 U.S. and 104 Euro brightness for high-contrast printing</li></ul></div></div><div><div><div><div><div>Delivery</div><div><div>\$53.99</div><div>6,000/Case</div></div><div><div>1</div><div>ADD TO CART</div></div><div><div>Expected By:</div><div>Wednesday, January 11</div><div>This Item Ships Free</div></div></div><div><div>1-Hour Pick Up</div><div><div>(save an extra 5%)</div><div>\$51.29</div></div><div><div>None Available at:</div><div>870 South Colorado Blvd., Glendale, CO 80246</div><div><a href="#">Check Other Stores</a></div></div></div><div><div>Auto Restock</div><div><div>(save an extra 5%)</div><div>\$51.29</div></div><div><div>Automatically receive deliveries on the schedule you set.</div><div><a href="#">Learn More</a></div></div></div></div><div><div>Special Financing Available</div><div>Free Pick Up In Store</div><div>ShopRunner Eligible <a href="#">learn more</a>   <a href="#">sign in</a></div></div></div></div></div>
0		<p>Use non-toxic and environmentally friendly cleaning supplies. 3 POINTS (10 POINTS for cleaning companies)</p> <p><b>Conventional cleaners like Lysol and 409 are used for cleaning. We recommend using cleaners that are less toxic and better for people and planet. Staples carries its own line third-party certified products. For example, instead of using 409 Multi-Surface cleaner, use Staples' Sustainable Earth Multi-Purpose spray. You can purchase already diluted or in a concentrate form. You can find most cleaners, including wipes, in less-toxic formulations.</b></p> <div><div><div>Item: 919507    Model: SEB64032RTU    ★★★★★ Be the first to <a href="#">Write a Review</a></div><div></div><div><p><b>Product Details</b></p><ul style="list-style-type: none"><li>• Liquid all purpose cleaner spray</li><li>• Cleans water-washable surfaces: floors, walls, countertops, desks, cabinets, glass, porcelain</li><li>• Neutral PH and ammonia and phosphate free</li><li>• Safer for you and the environment</li></ul><div><a href="#">View Full Product Details</a></div></div></div><div><div><div><div><div>Delivery</div><div><div>\$39.99</div><div>12/Carton</div></div><div><div>1</div><div>ADD TO CART</div></div><div><div>Expected By:</div><div>Wednesday, January 11</div></div></div><div><div>Not Sold in Stores</div></div><div><div>Auto Restock</div><div><div>(save an extra 5%)</div><div>\$37.99</div></div><div><div>Automatically receive deliveries on the schedule you set.</div><div><a href="#">Learn More</a></div></div></div></div><div><div>Special Financing Available</div><div>Free Pick Up In Store</div></div></div></div></div>
		<p><b>You can also look for greener cleaners available locally; Target carries a large selection. Brands to look for include Method, Seventh Generation, or ECOS.</b></p> <p><b>Regardless of which brand you prefer, always look for third-party certifications when you purchase cleaning products. These certifications ensure that products have been evaluated for minimal environmental and human health impact. More information below:</b></p>

		<p>There are four generally accepted third party certifications. Green Seal, Eco Logo, Safer Choice (EPA), and USDA BioPreferred.</p> <p>Green seal has developed life cycle-based sustainability standards for products, services and companies and offer third-party certification for those that meet the criteria in the standard. <a href="http://www.greenseal.org/FindGreenSealProductsAndServices.aspx">http://www.greenseal.org/FindGreenSealProductsAndServices.aspx</a></p> <p>Eco Logo ensures only the top 20% of products on the shelf can be certified. <a href="http://www.environmentalchoice.com/en/">http://www.environmentalchoice.com/en/</a></p> <p>EPA's Safer Choice (formerly known as EPA Design for the Environment): <a href="https://www.epa.gov/saferchoice">https://www.epa.gov/saferchoice</a></p> <p>USDA's BioPreferred – designed to promote bio-based products and reduce the use of petroleum-based ingredients.: <a href="https://www.biopREFERRED.gov/BioPreferred/faces/Welcome.xhtml">https://www.biopREFERRED.gov/BioPreferred/faces/Welcome.xhtml</a></p>
2		<p>Examine purchasing policies for environmental impact. Purchase reusable, recyclable or compostable products such as dishes, utensils and hand towels. 5 POINTS</p> <p><b>There's only a small snack bar at the Nordic Center, and no dishwasher for reusable beverage containers. Because of this limitation, the Nordic Center should work with the Day Lodge to ensure that all disposable products are made of renewable resources or contain recycled-content. Continue to purchase wooden stir sticks; these should be composted. Because there is a refrigerator, consider purchasing a carafe for creamer instead of using disposable creamer cups. The carafe could be cleaned in the restroom sink or in the Day Lodge kitchen.</b></p> <p><b>Suggestions for improvement:</b></p> <ol style="list-style-type: none"><li>1. <b>Continue to purchase either compostable and/or recycled-content cups. Purchase napkins with recycled content. While we can longer compost these items, it is important to purchase products made of renewable resources or recycled content – either of these choices are better than purchasing products made from virgin paper material.</b></li></ol> <p><b>These napkins are available from Staples.</b></p> <div><p>Marcal Small Steps 100% Recycled Paper Napkins, 1-Ply, 6/Case</p><p>Item: 698563 Model: 6506-6 ★★★★★ (16)   <a href="#">Write a Review</a></p><div><div><div>6/Case</div><div><div>Delivery</div><div><b>\$29.99</b> 6 Packs/Case</div><div><div>1</div><div>ADD TO CART</div></div><div>Expected By Wednesday, January 11</div></div><div>Not Sold in Stores</div><div><div>Auto Restock</div><div>(save an extra 5%)</div><div><b>\$28.49</b></div><div>Automatically receive deliveries on</div></div></div></div><ol style="list-style-type: none"><li>2. <b>Continue to purchase wooden stir sticks. These can still be composted in Summit County's program.</b></li><li>3. <b>Purchase a reusable metal coffee filter. Make sure you're composting your coffee grounds!</b></li></ol></div>
3		<p>Minimize excess paper usage in operations: print double sided whenever possible, invoice electronically, etc. 3 POINTS (5 POINTS for doctor's offices)</p> <p><b>Rental forms are completed electronically. Waivers are printed at lawyer's suggestion.</b></p>

NA		<p>Reduce the amount of mail you receive (when possible). (Requesting no-mail service involves contacting individual vendors or joining a no-mail services) 5 POINTS</p> <p><i>The following information comes from the Federal Trade Commission:</i> The Direct Marketing Association's (DMA) Mail Preference Service (MPS) lets you opt out of receiving unsolicited commercial mail from many national companies for five years. When you register with this service, your name will be put on a "delete" file and made available to direct-mail marketers and organizations. This will reduce most of your unsolicited mail. However, your registration will not stop mailings from organizations that do not use the DMA's Mail Preference Service. To register with DMA's Mail Preference Service, go to <a href="http://www.dmachoice.org">www.dmachoice.org</a>, or mail your request with a \$1 processing fee to:</p> <p><b>DMACHoice</b>  Direct Marketing Association  P.O. Box 643  Carmel, NY 10512</p>
5		<p>Recycle hard-to-recycle items: phone books, printer/toner cartridges, cell phones, hazardous waste, building materials and batteries. 5 POINTS (10 POINTS for car maintenance and auto body shops)</p> <p><b>All materials are properly recycled.</b></p>
0		<p>Compost food and/or yard waste. 5 POINTS (10 POINTS for restaurants)</p> <p><b>Composting is available at the Day Lodge. Guests of the Nordic Center don't really need to compost given the small amount of food items available for purchase. However, the Nordic Center should compost its coffee grounds, paper filters, and wooden stir sticks. These can be collected and emptied in containers at the Day Lodge.</b></p>

Renewable Energy		
0		<p>Install renewable energy system, or purchase share in local solar garden. 15 points reflects full offset of energy usage. 5 points is given for ANY offset by renewable energy, an additional 1-10 points given as a percentage of total offset. Example: 20% of total energy use offset = 7 points total; 5 minimum point allotment plus 2 for 20%. 15 POINTS</p> <p><b>Would be great to add solar!</b></p>
Audits		
5		<p>Technical Energy Audit: An energy audit has been prepared by a qualified professional. The audit examines heating and lighting use in the existing business and makes recommendations on improvements that reduce energy consumption. 5 POINTS</p>
5		<p>Sustainability Audit: A sustainability audit has been prepared by a qualified professional. The audit examines waste reduction, water conservation, transportation, and other business practices and makes recommendations on sustainable measures that can be implemented to enhance conservation efforts while improving the business bottom line. 5 POINTS</p>
68		<b>Points Total (Out of 138)</b>



## Energy Assessment Report

Provided by High Country Conservation Center



Frisco Nordic Center  
621 Recreation Way  
Frisco, CO

### **Services Completed**

Frisco Clean Tracks Commercial Energy Assessment

# BUSINESS ENERGY ASSESSMENT



An Energy Audit will give you as a business owner an independent, third party perspective on how your building is performing and where to best spend money on efficiency upgrades. In addition to efficiency these upgrades will improve comfort, property value and the marketability of the building. HCCC uses the fees collected from your audit to further pursue our conservation mission in our mountain community. Another great way to invest in your business and home town!

The Recharge Colorado website states that the average energy (natural gas and electricity combined) costs for a healthcare business is \$2.51 per square foot. Please remember that an average building is not energy efficient. Follow the link below for small business energy tips from the Governor's Energy Office.

[http://rechargecolorado.org/index.php/commercial\\_and\\_public/small\\_business\\_resource/](http://rechargecolorado.org/index.php/commercial_and_public/small_business_resource/)

We appreciate that you chose [High Country Conservation Center](#) to help you with your business's comfort, energy efficiency and safety. When approaching energy saving opportunities for a building of this scale it makes sense to target the most cost-effective issues first, then over time target the larger ticket items. It's important to keep in mind that energy improvements can take place over years or even decades. Whenever building improvements are made you should look for the energy improvement opportunities within that upgrade. This report will map out this process and detail those improvements.

Sincerely,

**Cody Jensen**

**Energy Programs Manager**

**Certified Building Analyst Professional**

**Building Performance Institute (BPI)**

[cody@highcountryconservation.org](mailto:cody@highcountryconservation.org)



# BUSINESS ENERGY ASSESSMENT



## Top Priorities

### **Heating Fuel Priorities**

1. Targeted Air-Sealing
2. Distribute conditioned air more effectively
3. Install Programmable Thermostats

### **Electrical Priorities**

1. Replace Lighting with LED Fixtures/bulbs

### **Water Conservation Priorities**

1. Replace/upgrade high-use bathroom fixtures with low-flow models

*\* Please see the appropriate section of the report for details on the recommended improvements.*

*(These contractors are local and have been certified as Building Analysts by the Building Performance Institute)*

#### **Comfort by Kodiak**

**Dave Koons**

Retrofit Contracting

**970-468-2446**

#### **About Saving Heat**

**Dennis Brachfeld**

Retrofit Contracting

**970-485-5634**

#### **Energy Smart**

**Mark Anderson**

Retrofit Contracting

**970-485-3327**

#### **Deeper Green Consulting**

**Matt Wright**

Retrofit Contracting

**970-389-2448**

#### **Innovative Energy**

**Eric Westerhoff**

PV Solar Contracting

**970-453-5384**

#### **Peak Building Services**

**Tony Huggins**

Lighting Contractor

**970-406-8452**

#### **EpicStar LED**

**Scott Klohs**

Lighting Contractor

**720-244-2001**

A list of other local contractors can be found on Governor's Energy Office website [www.rechargecolorado.com](http://www.rechargecolorado.com) as well as Xcel Energy's website [http://hvacreducation.net/xcel-co/public\\_search.cfm](http://hvacreducation.net/xcel-co/public_search.cfm)

*\* HC3 does not guarantee the contractors' expertise or reputation; do not warrant any of the products or services installed. HC3 shall have no liability for contractors' work or negligence.*

## Heating Fuel Priorities

### **-Air leaks**

In Summit County's climate zone, air leakage may account for up to 40% of your overall heating costs.

When performing air-sealing work on your business, we strongly recommend working with a contractor who will use a blower door to direct their air-sealing efforts. Without using a blower door, the contractor will not know whether they achieve your air leakage reduction goals. Be sure to discuss these goals before work begins.

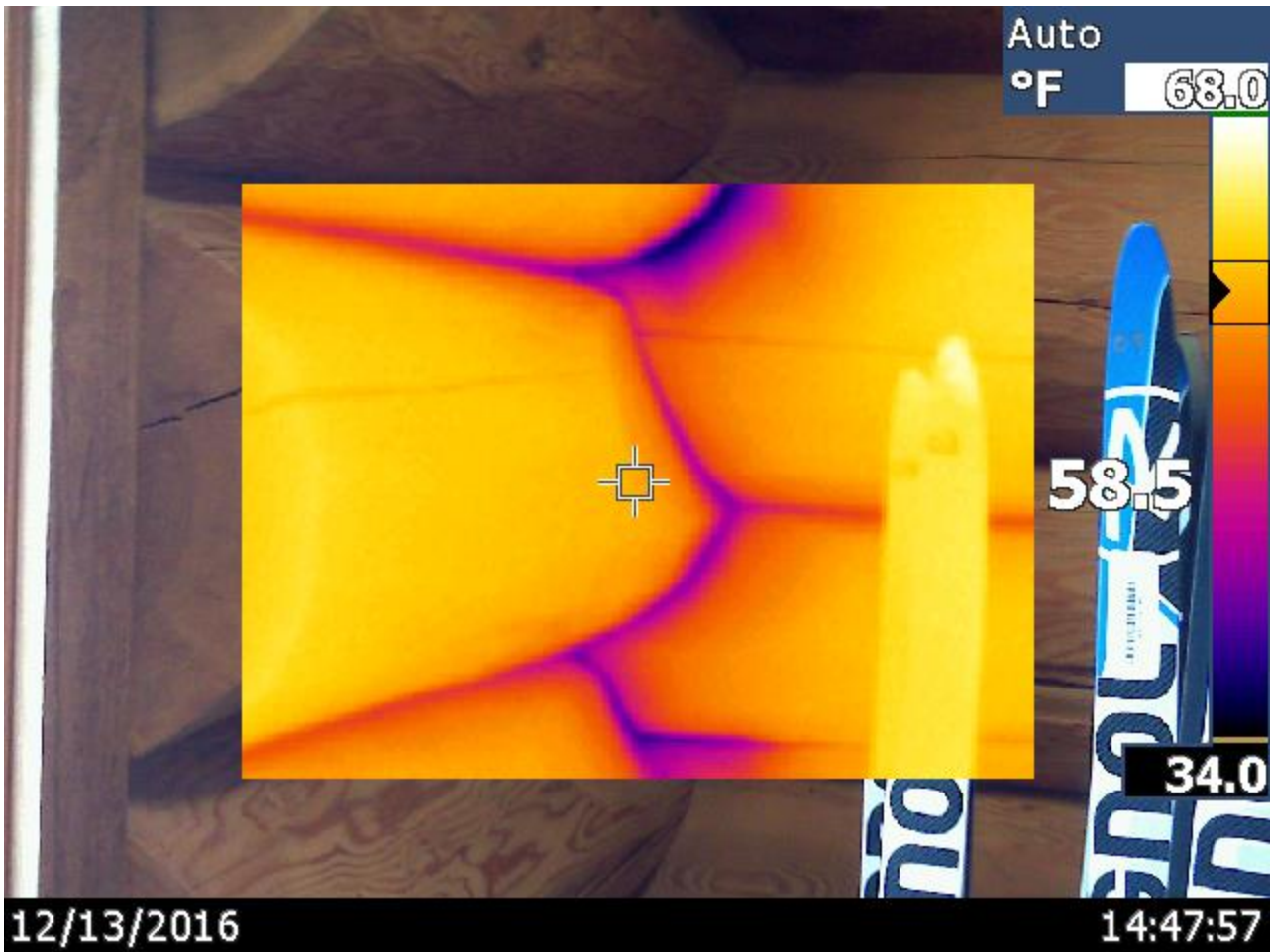
AIR LEAKAGE	
<b>Condition</b>	<p><b>Significant air leaks were:</b> Log intersections, log gaps, tongue and groove ceiling, Wall top plates, wall penetrations, door weather stripping, door sweeps, baseboards, and windows</p> <p><b>Other air leaks may include:</b> bath vents, outlets / switches, baseboards, light fixtures, window trim, and wall top plates</p>
<b>Improvements</b>	<p>Air-sealing improvements are some of the most cost effective ones you can perform. Even the smallest of air-leaks can add up to create an uncomfortable and energy inefficient work space. We recommend having your contractor:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Plug gaps around pipes, ducts and wiring that go through walls, ceilings and floors with expanding foam.</li> <li><input type="checkbox"/> Caulk around window and door trim.</li> <li><input type="checkbox"/> Add weather stripping to doors.</li> <li><input type="checkbox"/> Seal all framing connections above foundation wall with expanding foam.</li> <li><input type="checkbox"/> Insert foam gaskets behind the outlets and install childproof plugs.</li> </ul> <p><b>*NOTE: cellulose and fiberglass insulation <u>do not</u> significantly reduce air leakage in attics!</b></p> <p>For gaps ¼" or less, use caulk. For larger gaps, use spray foam.</p> <p>It is important to perform a radon test before and after sealing leaks in your house to ensure that you are aware of unsafe radon levels, and can take action if needed. Air sealing includes caulking, using expandable foam and weather-stripping inside the thermal envelope including: doors, windows, plumbing and electrical penetrations, outlets covers, gaps, and dry wall cracks.</p> <p>It is important to perform a radon test before and after sealing leaks in your house to ensure that you are aware of unsafe radon levels, and can take action if needed.</p> <p><b>Build Tight and Ventilate Right.</b></p> <p>If improvements bring your air leakage to less than 35%, we recommend a mechanical ventilation system to improve indoor air quality. One relatively inexpensive ventilation option is to replace one or more bath fans with low-power, high quality fans that run continuously or on a timer (some use as little as 11 watts). You may also consider a heat recovery ventilator (HRV) to bring in fresh air and exhaust stale air while retaining most of the warmth or coolness from your business.</p>

# BUSINESS ENERGY ASSESSMENT

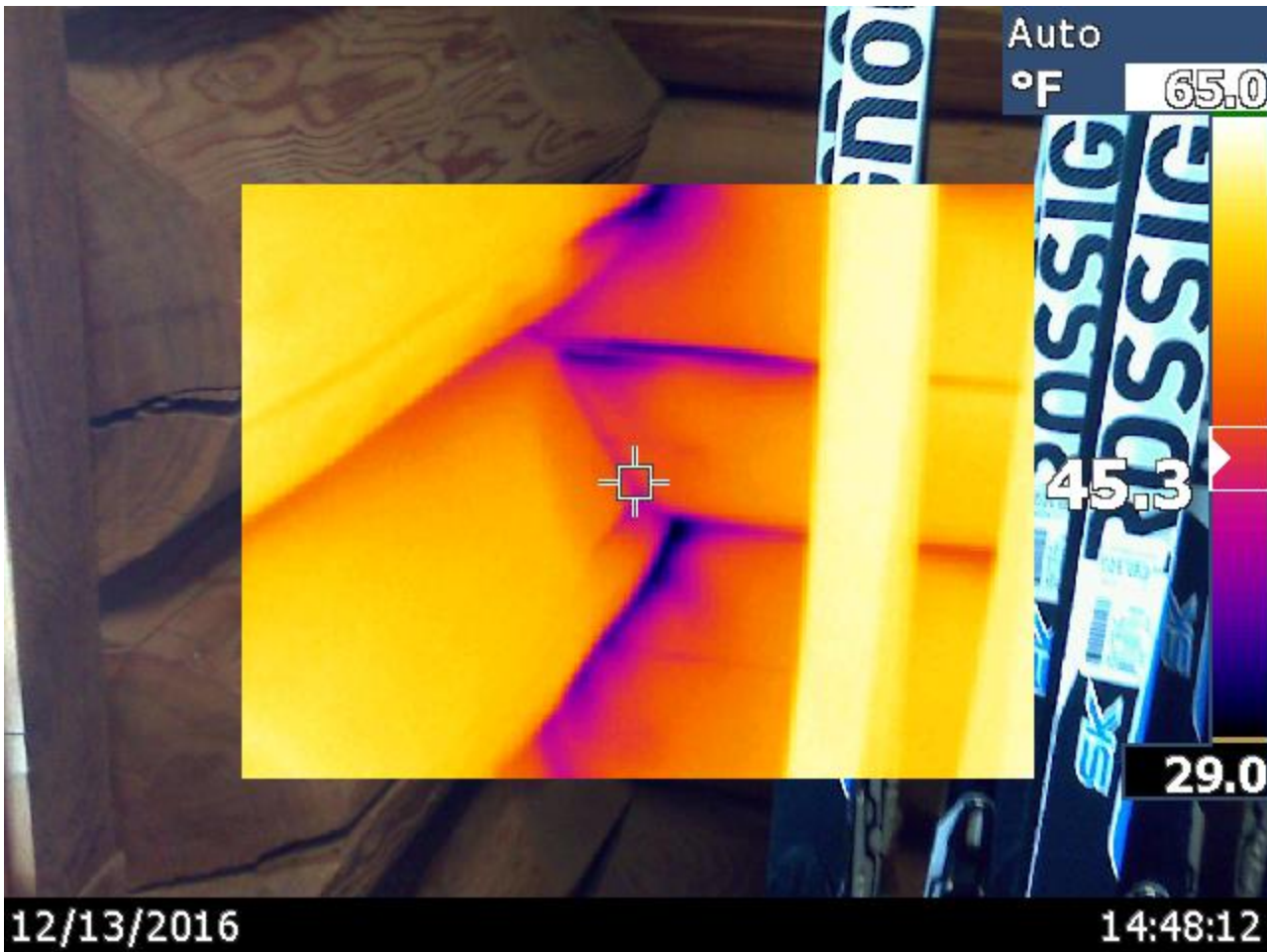


The Following Infrared images depict where cold air (indicated in blue/purple) is entering directly into your space. The log construction with fully vaulted tongue and groove ceilings create great opportunities for air leakage, and thus, vast improvements in comfort and efficiency if properly addressed. These are the highest priority areas for air sealing at the property.

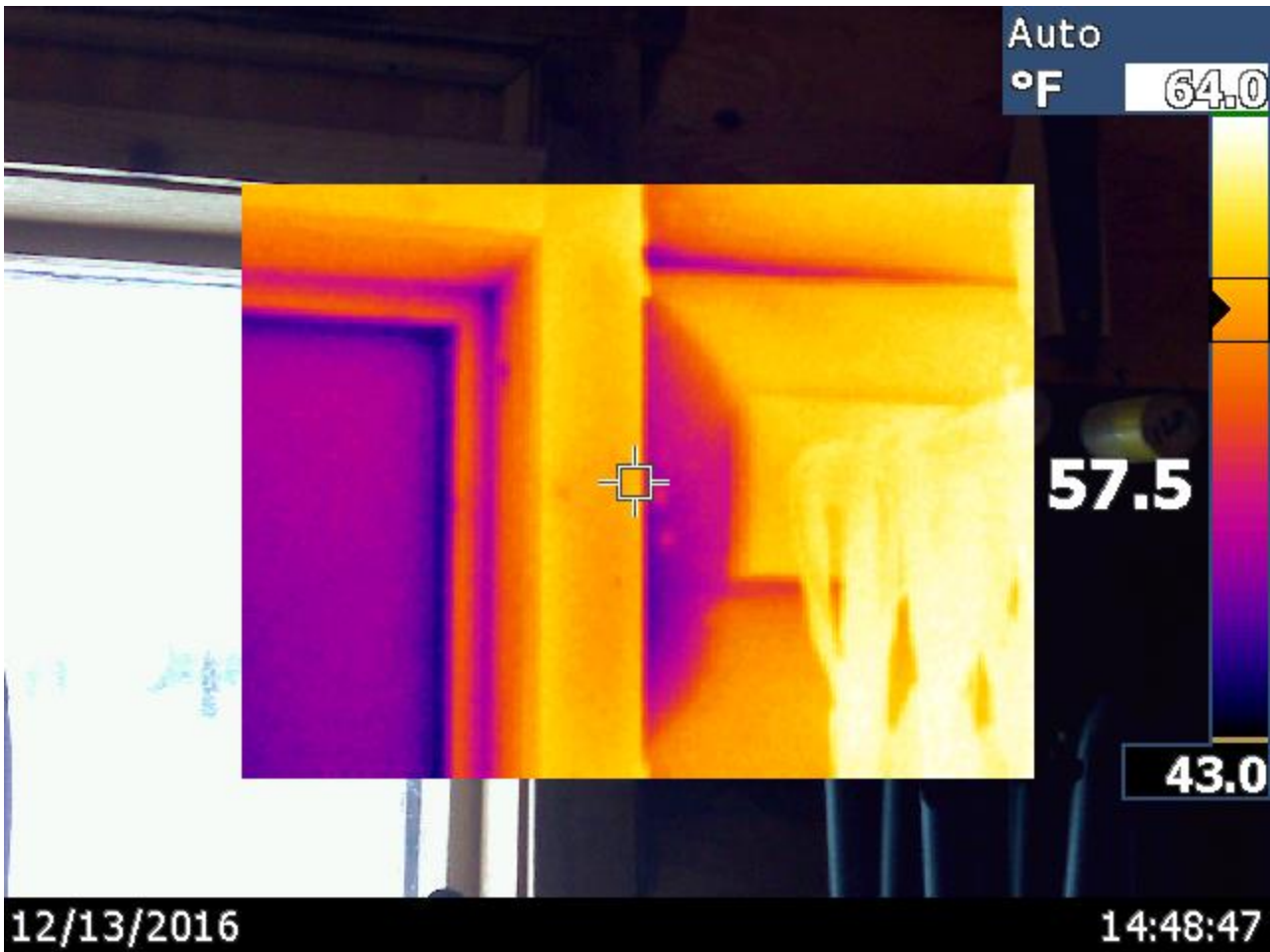
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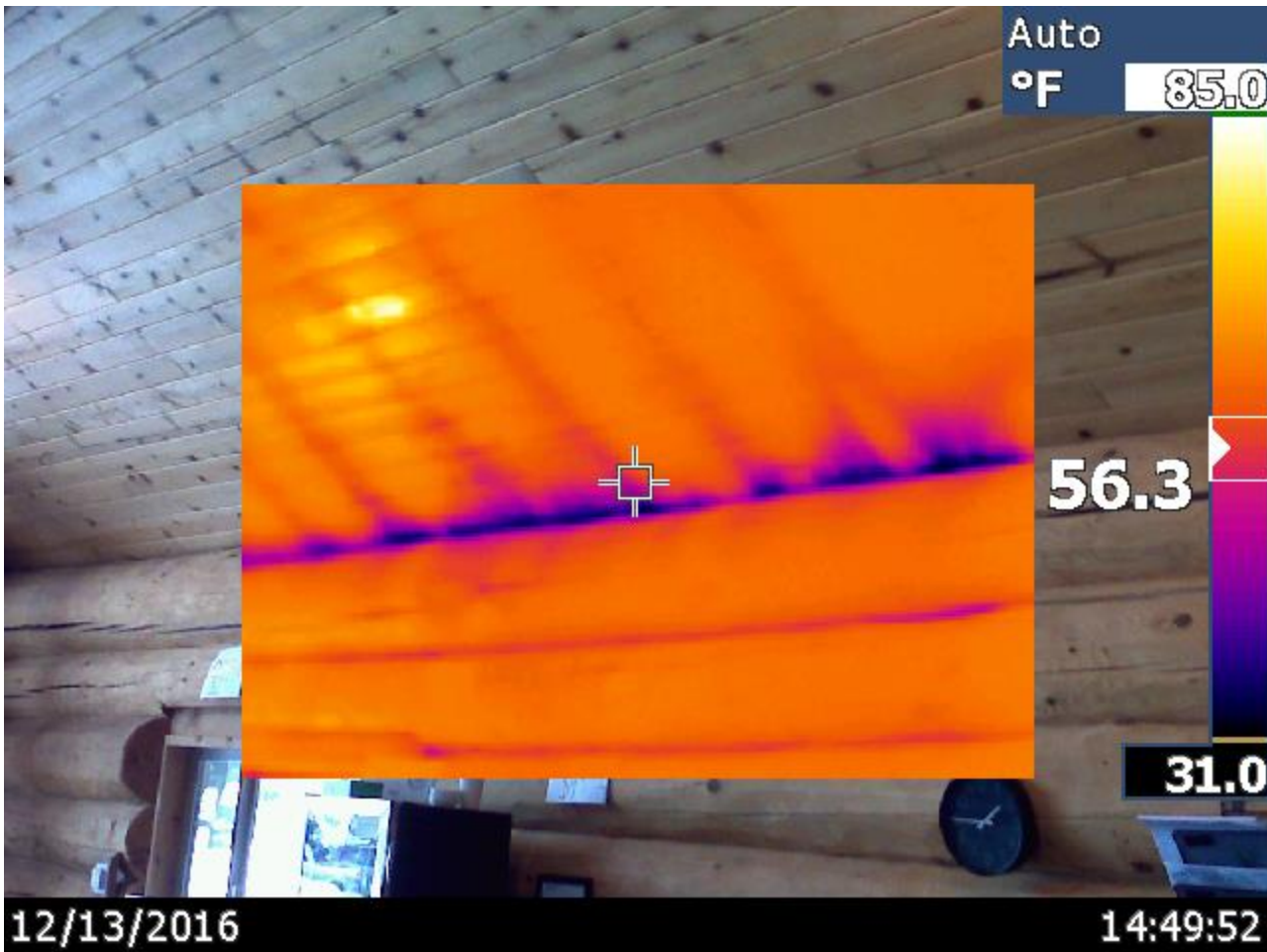




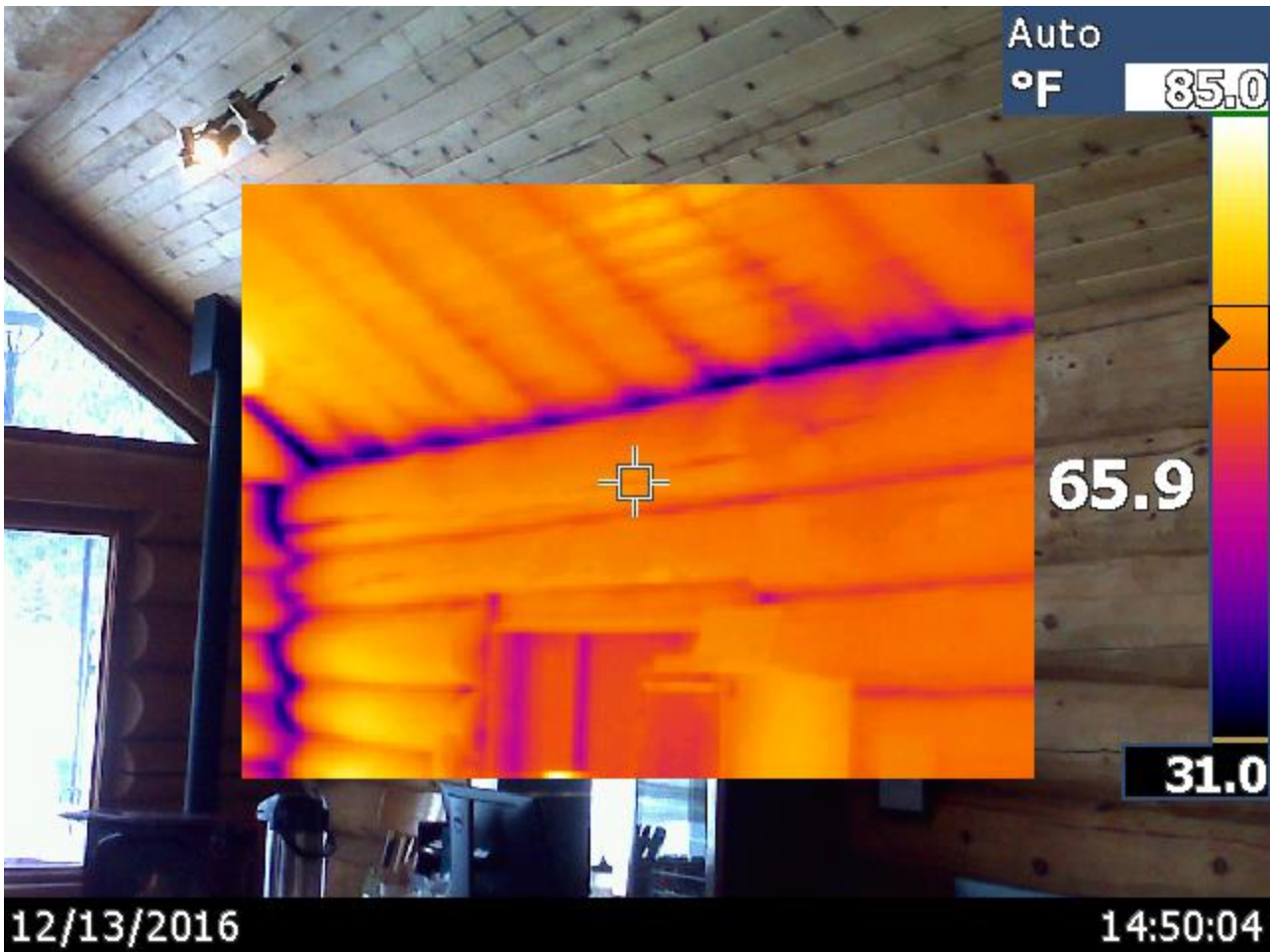
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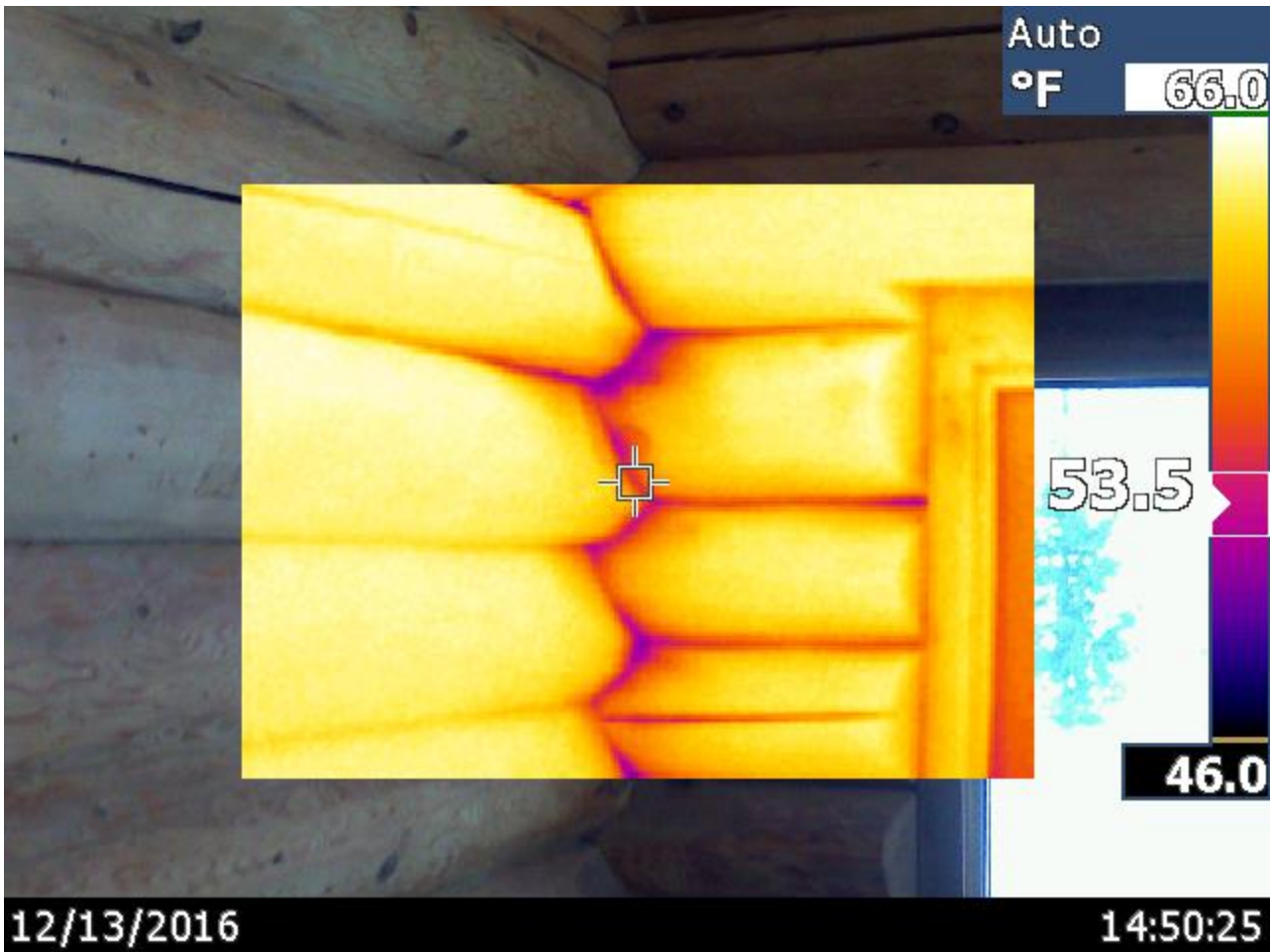


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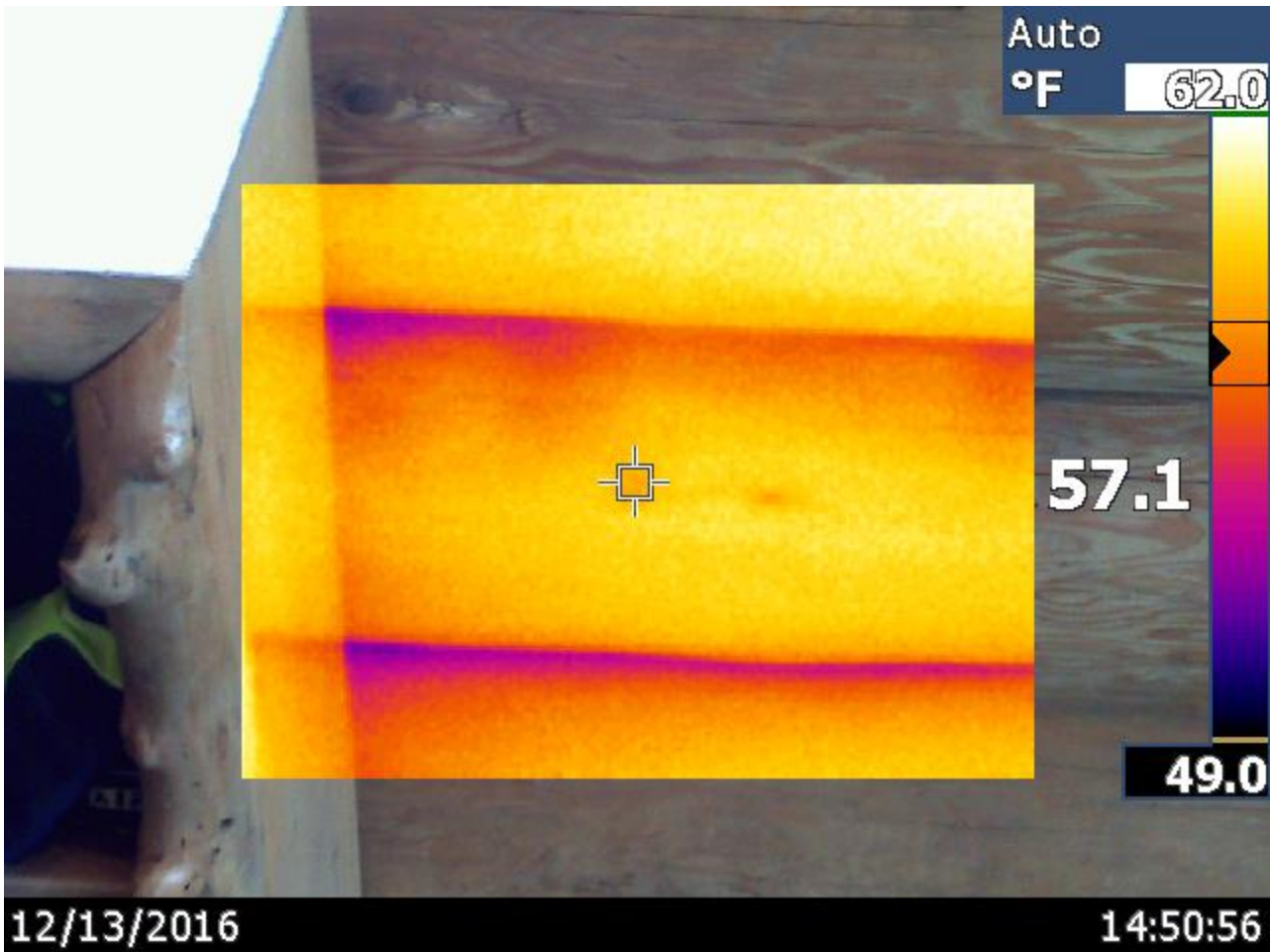




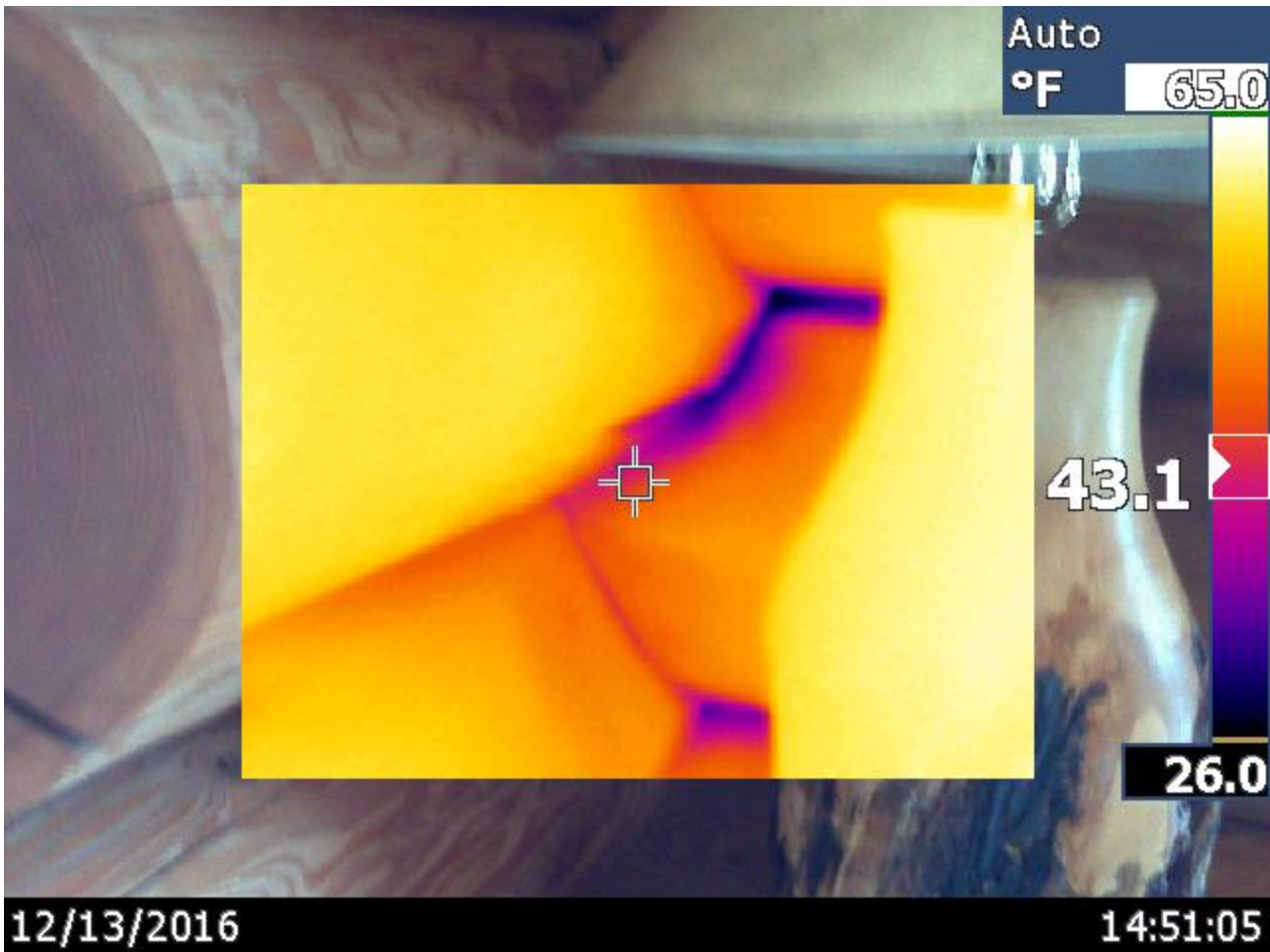
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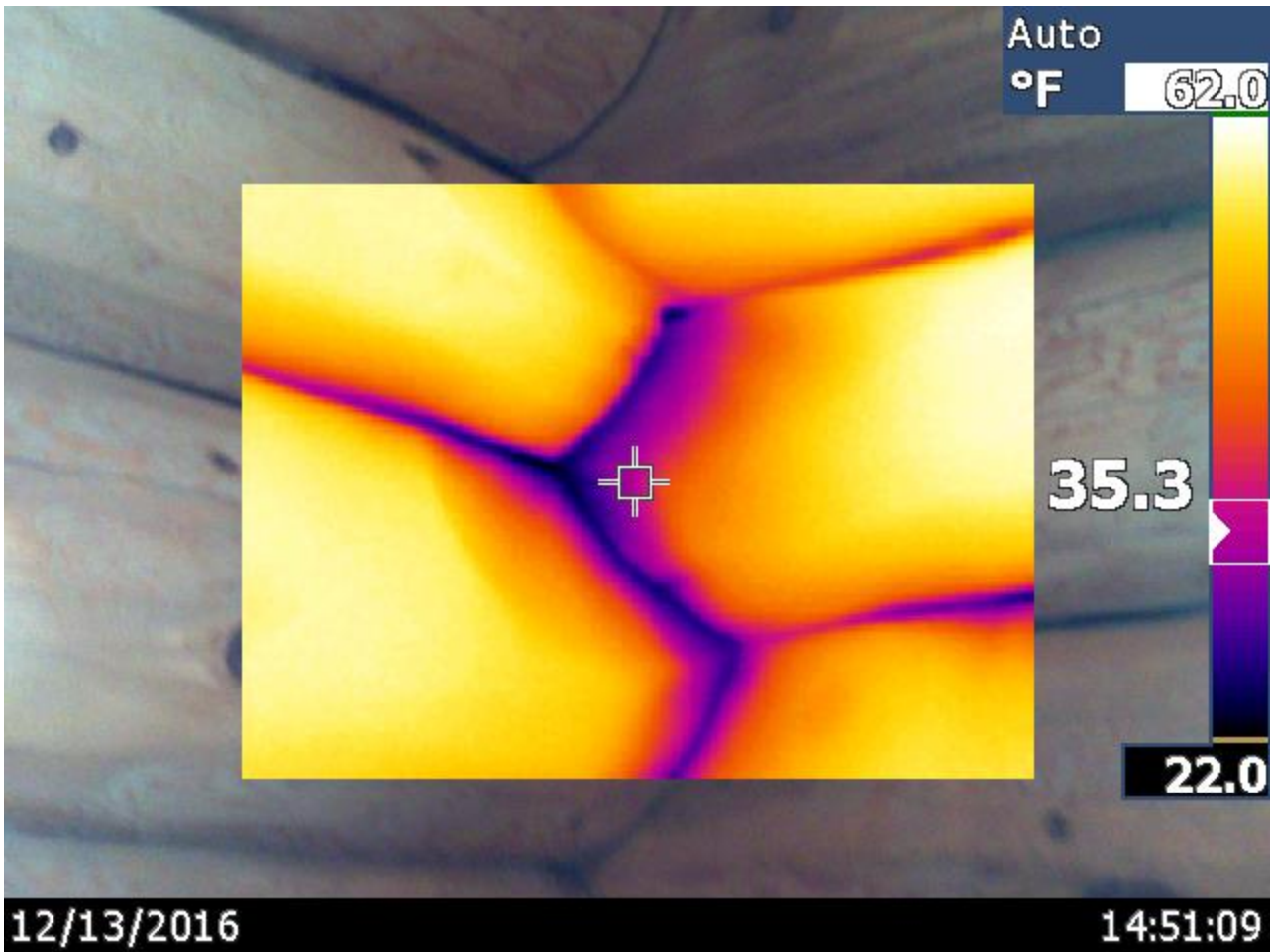
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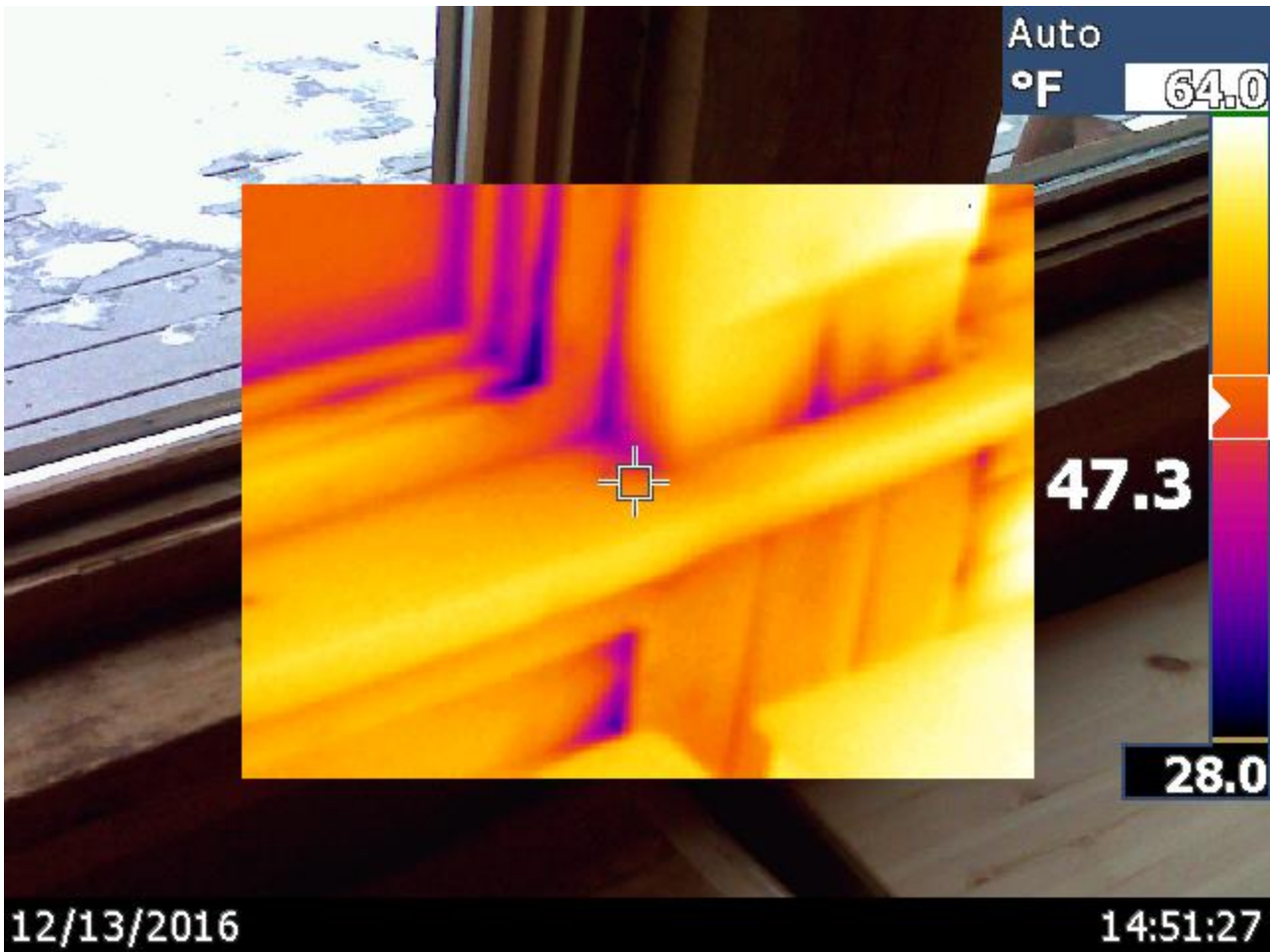


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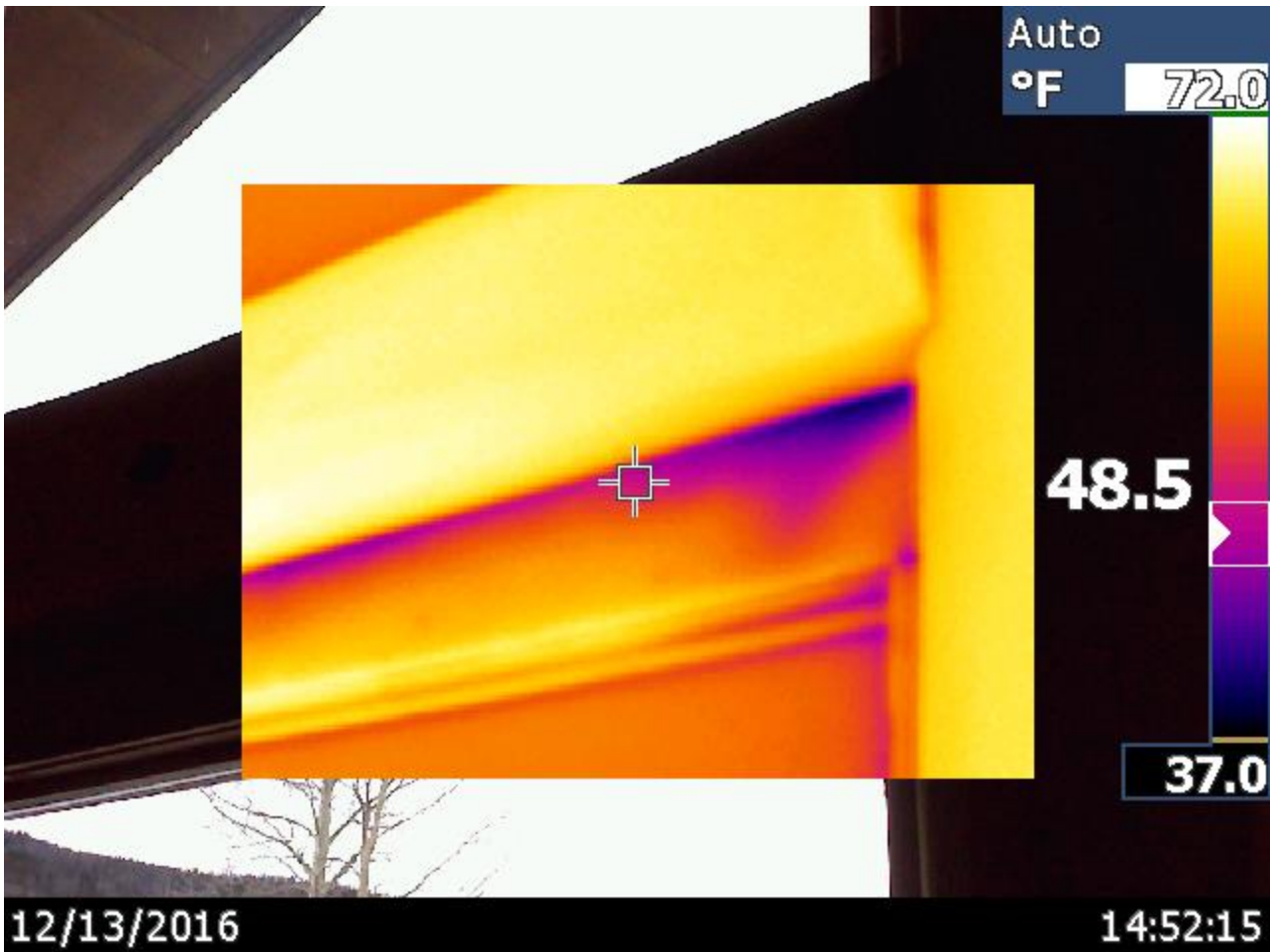




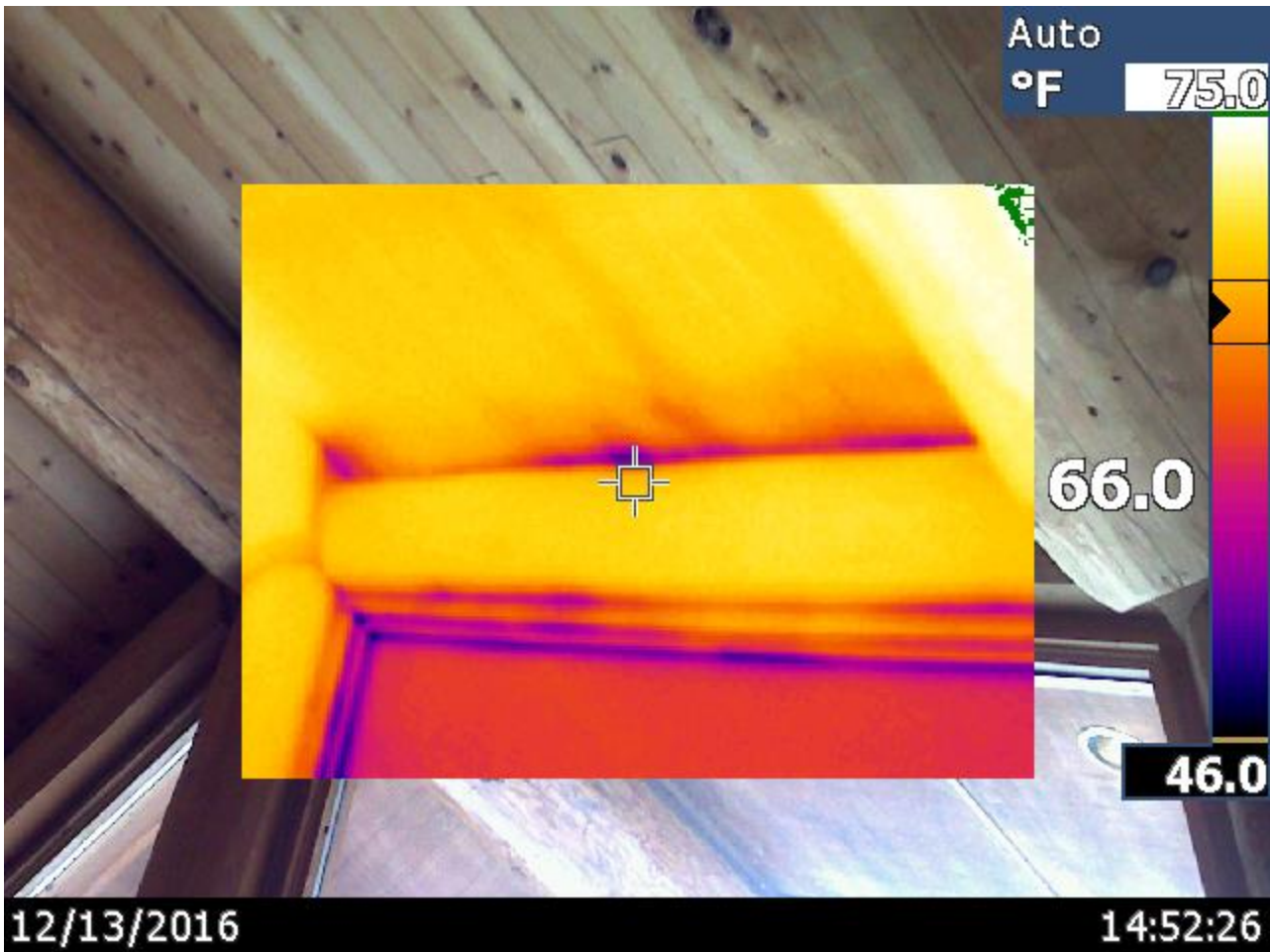
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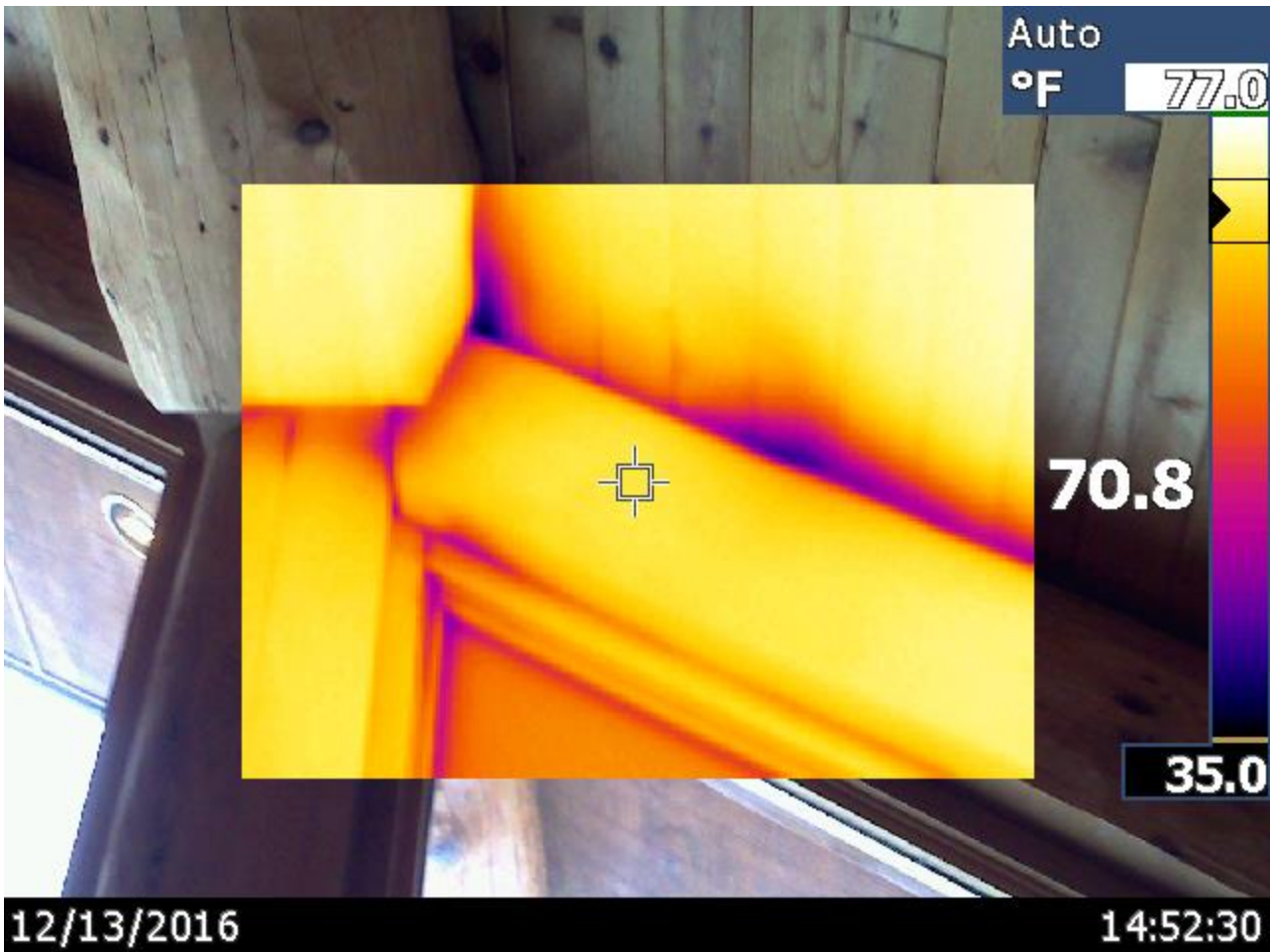
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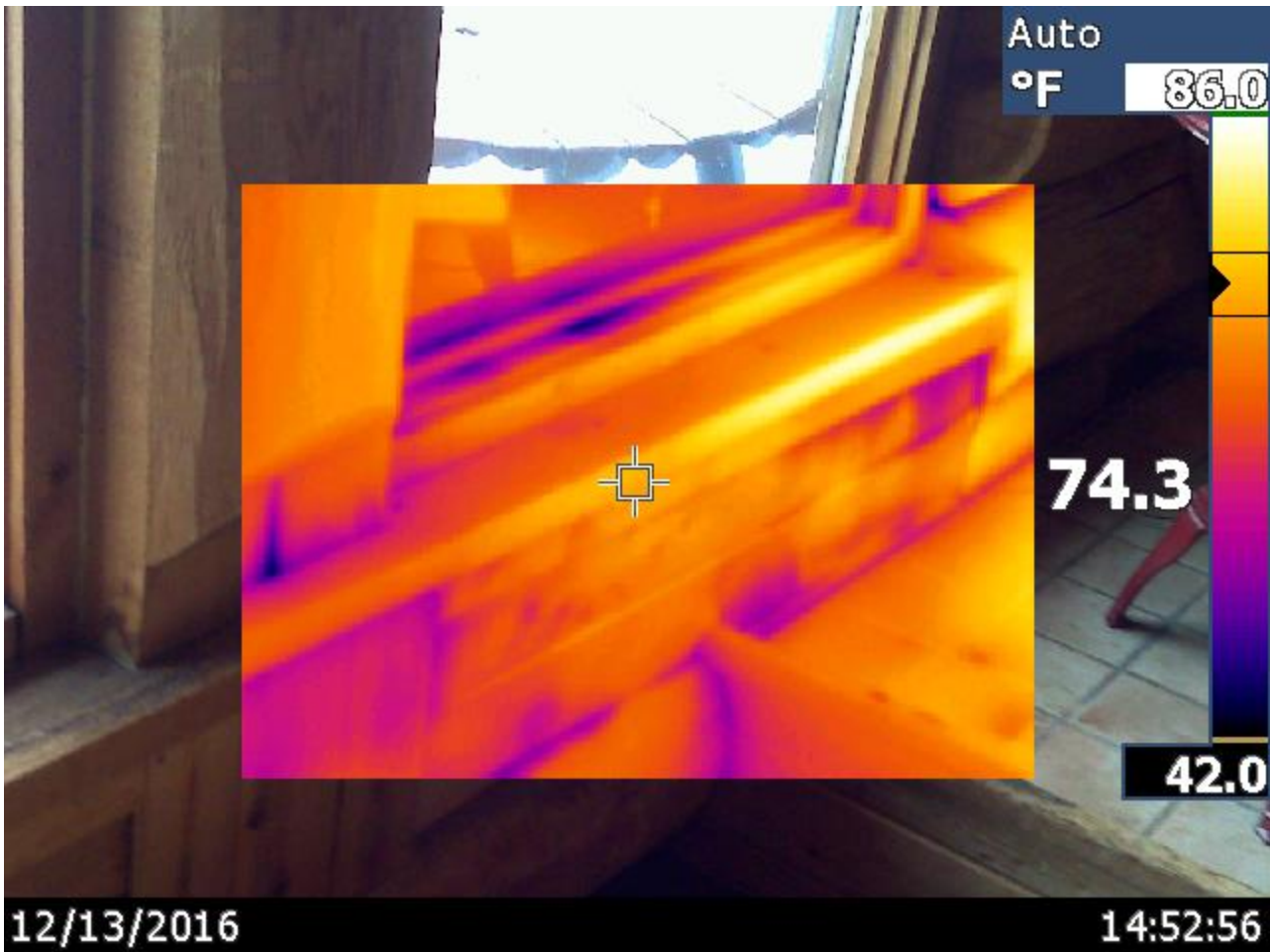




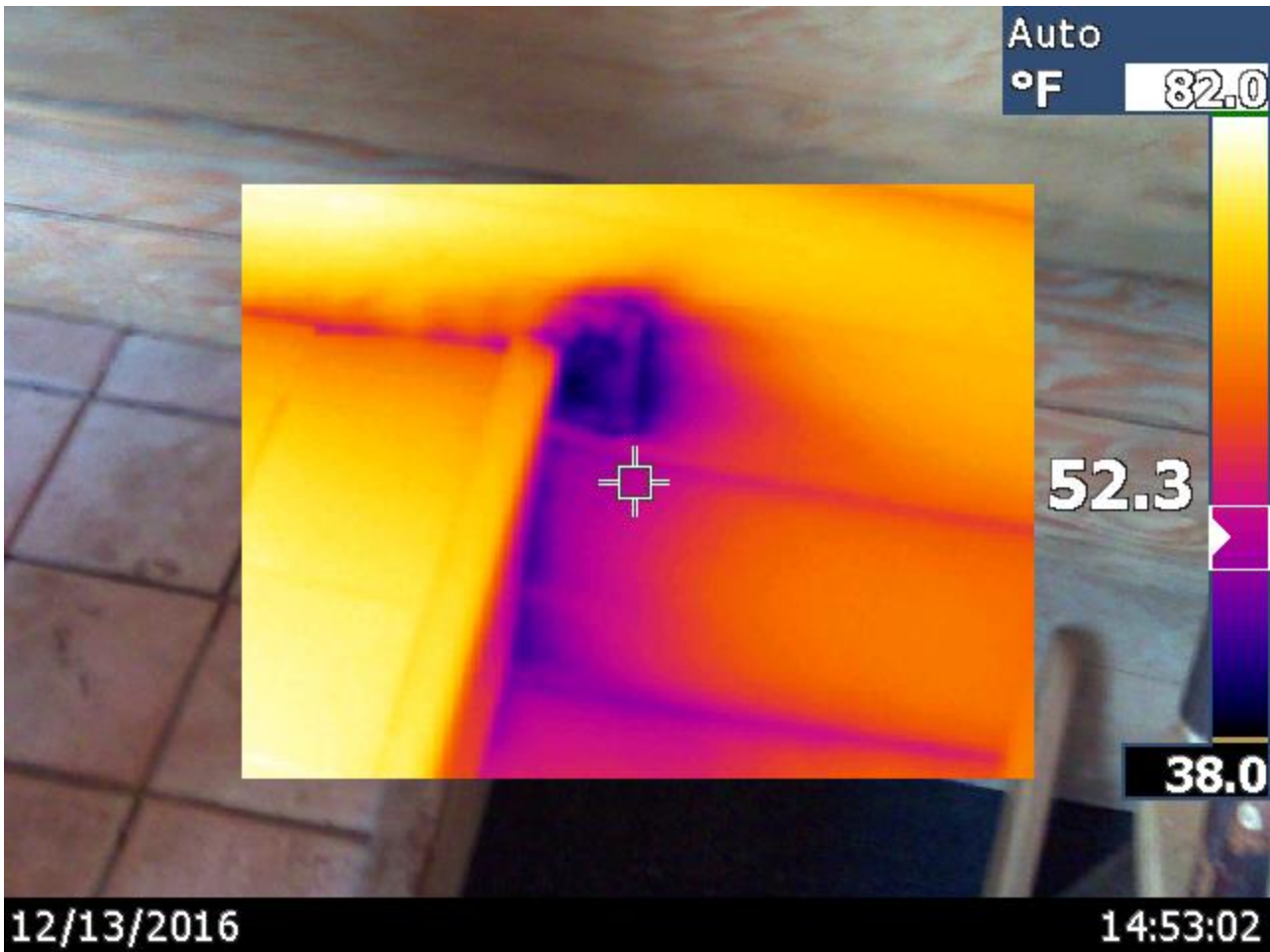
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# BUSINESS ENERGY ASSESSMENT

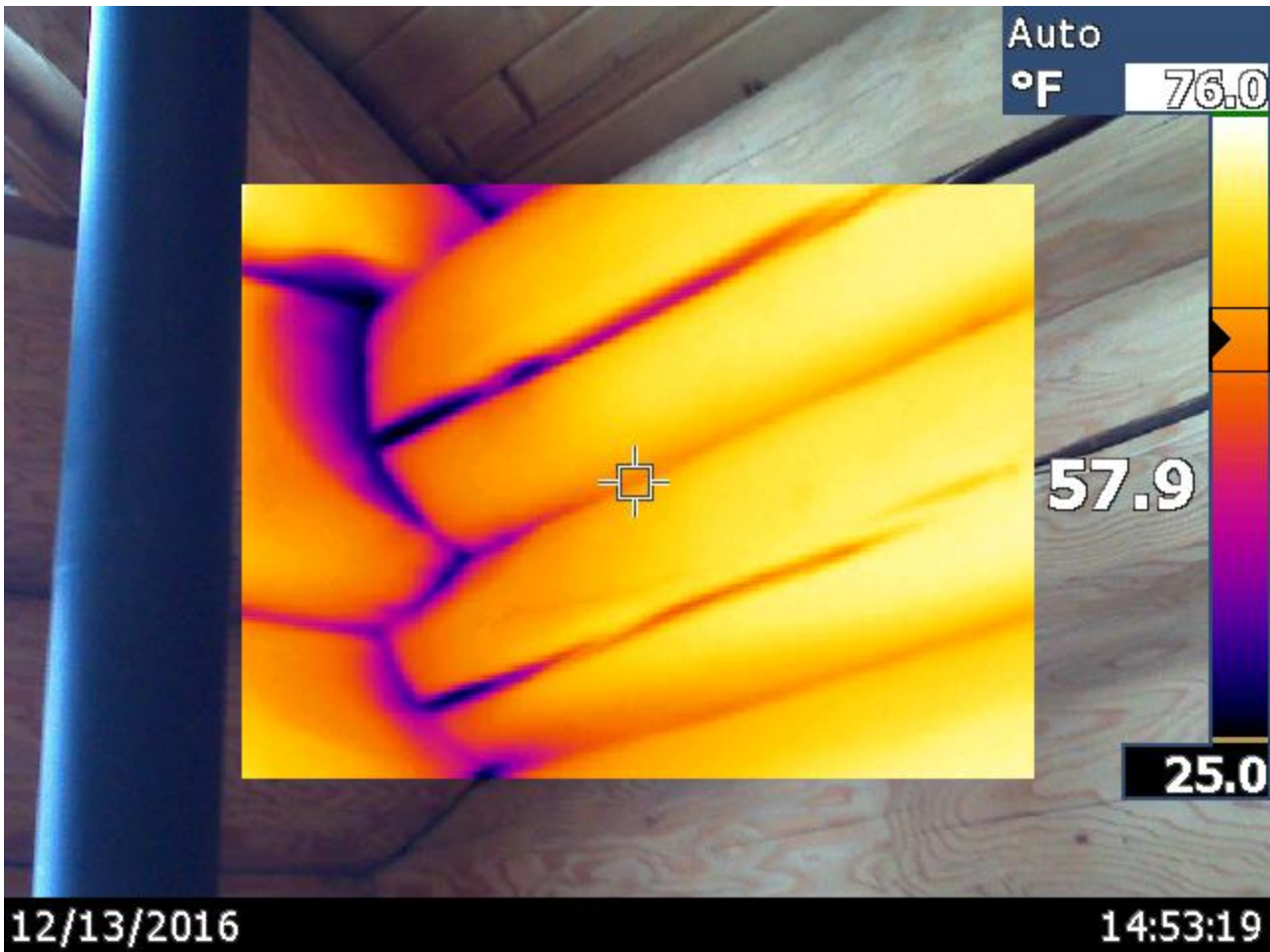




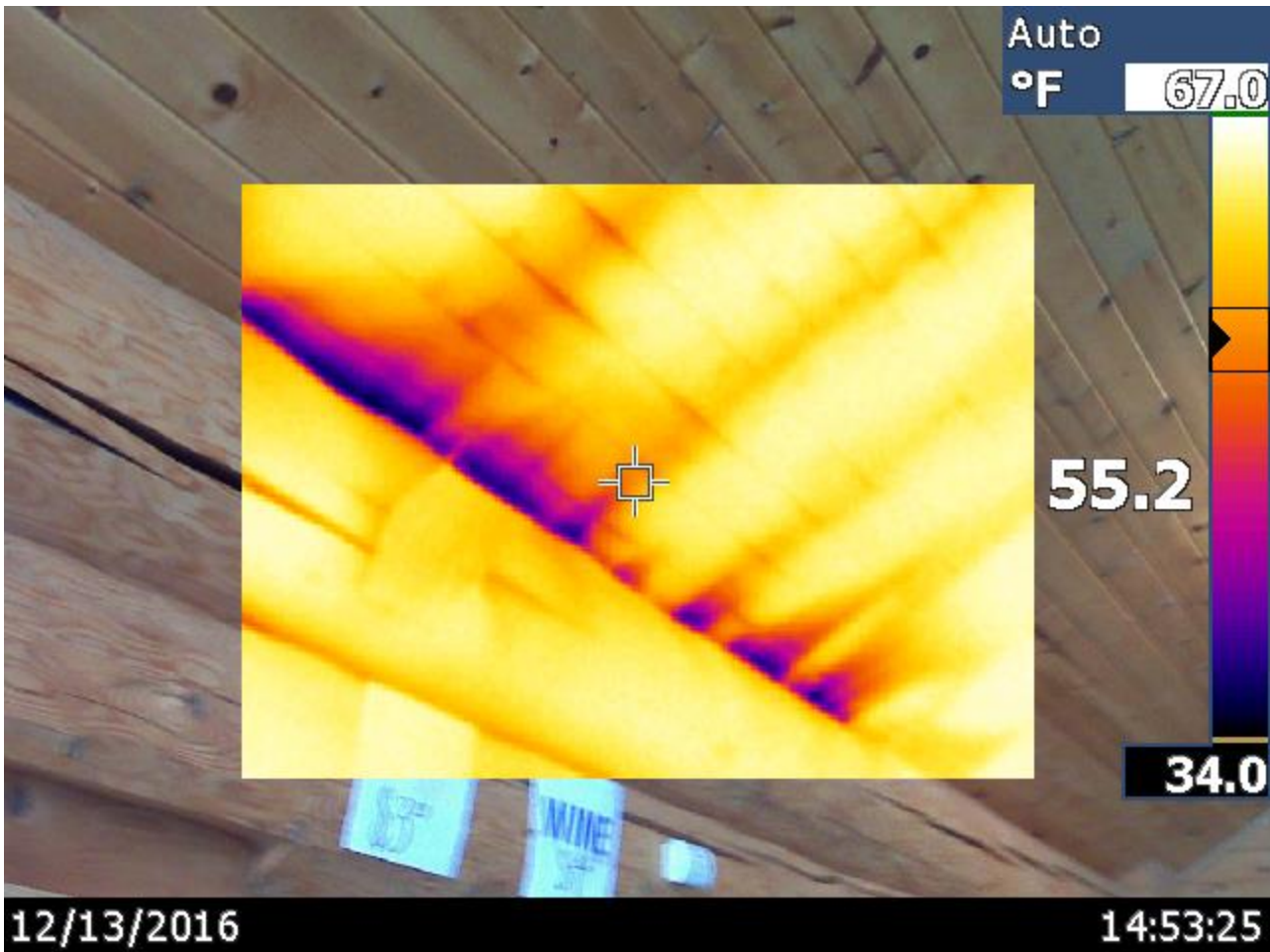
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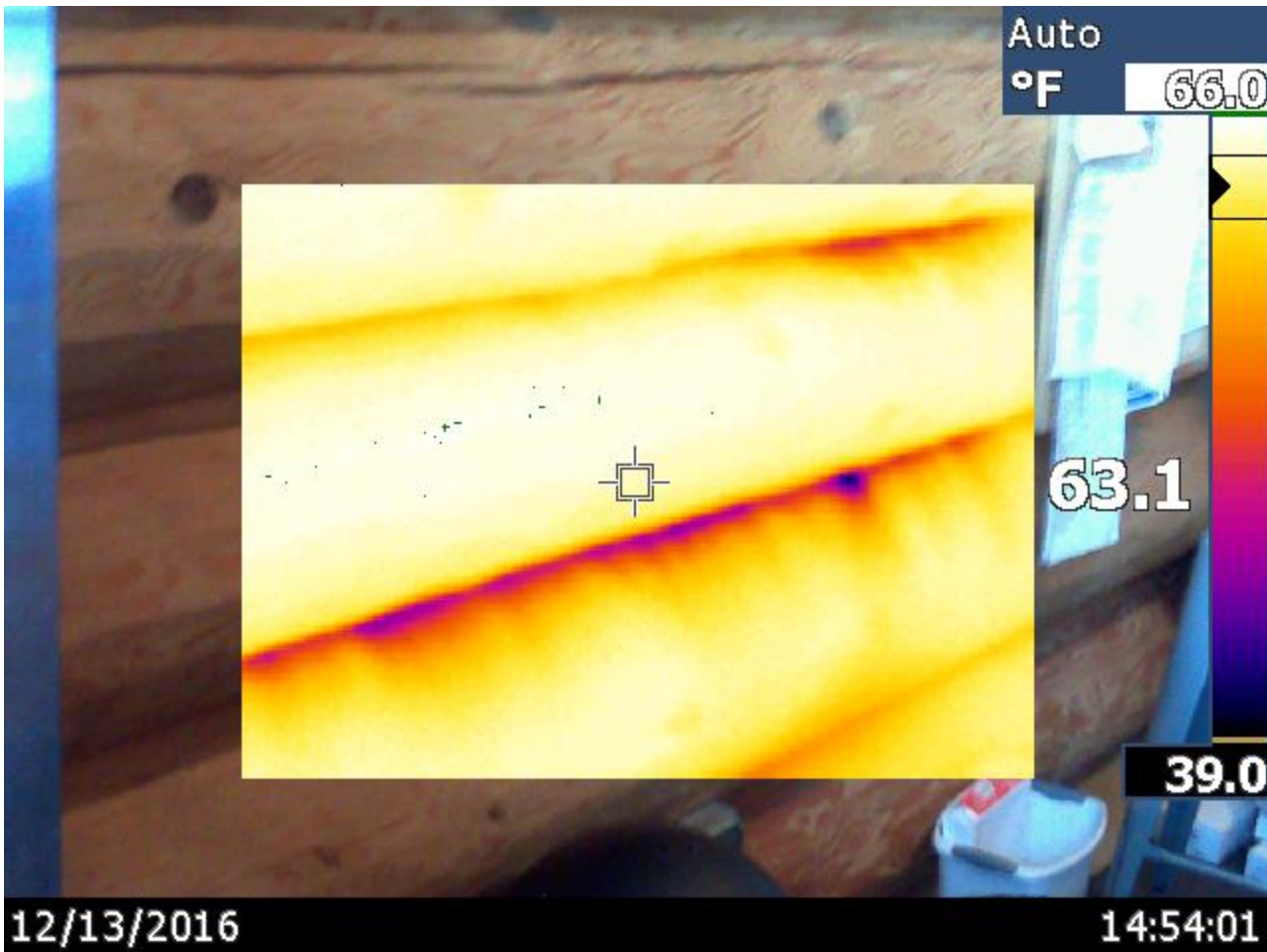


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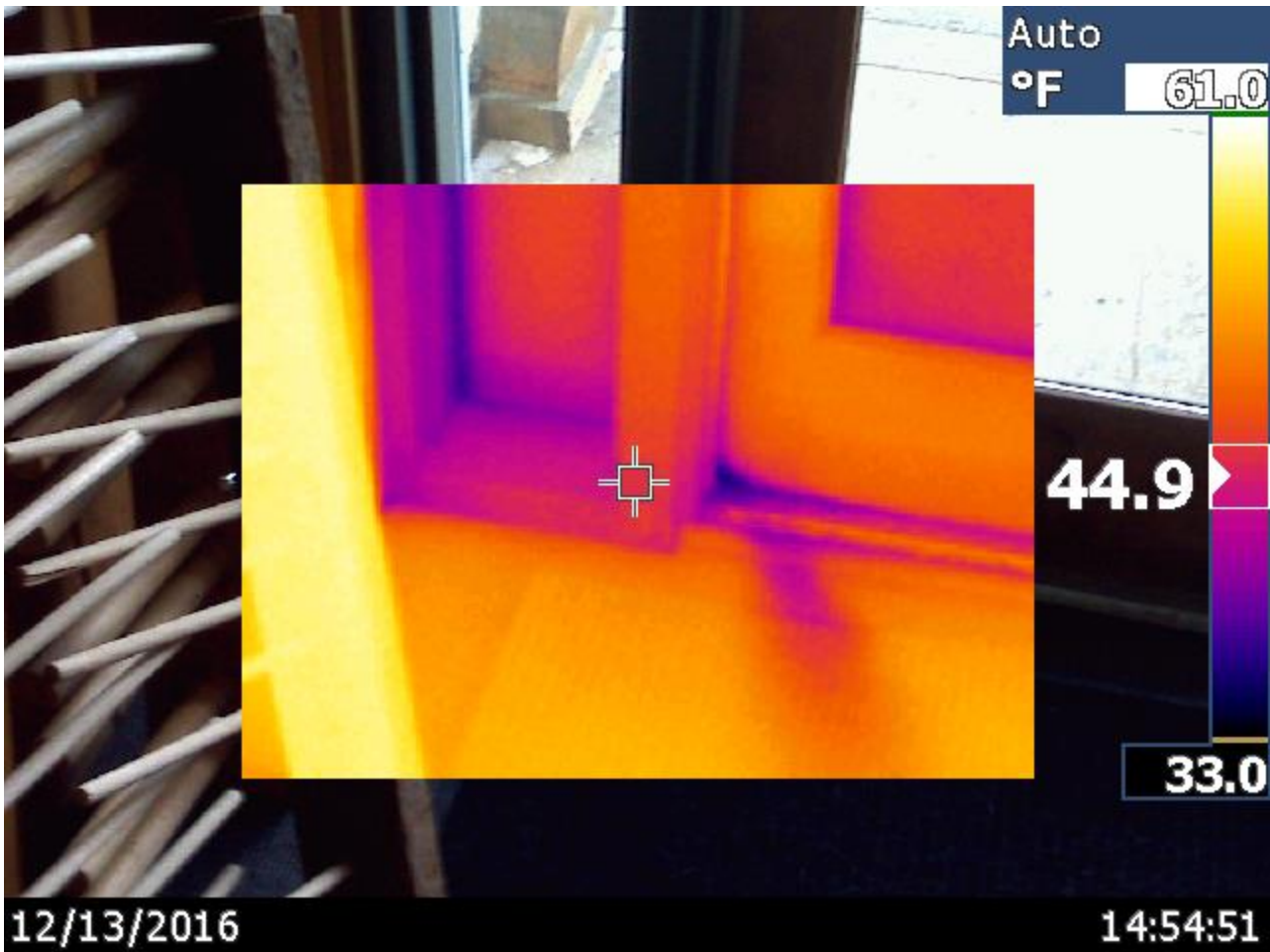




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## **-Distribute Conditioned air more effectively**

The Nordic Center benefits from the heating production of a gas-fired cast-iron stove. To ensure this unit is operating at its maximum efficiency, have the unit cleaned and inspected regularly to ensure efficient combustion and safe operating conditions. Consider installing a stone backsplash on the corner walls to more effectively reflect produced heat into the room. This will improve comfort, reduce appliance heating demand, and reduce unwanted warming of the timbers behind the unit which could potentially lead to various building durability issues (condensation, ice damming). Furthermore, install a small fan behind the unit to direct airflow across the heated surface of the unit and out into the public space. Finally, consider moving the thermostat controlling this unit further from the unit itself to gather a more accurate temperature representation of the room.







## **-Install a Programmable Thermostat (for electric baseboards)**

This is a relatively inexpensive, fast, and effective energy improvement you can make to your commercial space today. I recommend setting back your temperature to 58 when outside of normal business operating hours.

Install a programmable thermostat or at least a digital thermostat for more accurate control of the heating system. Wi-Fi enabled thermostats offer total control from anywhere that has an Internet connection. Not only can a Wi-Fi thermostat be controlled with a remote control from any room in your business, but it can also be accessed from a computer or mobile device when you are away from work. This is a particularly effective and useful tool for businesses with off-site facility/property managers.

### **Rules of Thumb for Proper Programmable Use:**

1. Keep the temperature set at its energy savings set points for long periods of time (at least eight hours), for example, during the day, when no one is at home, and through the night, after bedtime. If you have in-floor heat provided by a boiler, long energy saving set points typically don't make sense due to the amount of time it takes for your home to heat back up to the normal set point. Each home is different, so it might take some experimenting with different times and set points to find a plan that works for you.
2. All thermostats let you temporarily make an area warmer or cooler, without erasing the pre-set programming. This override is cancelled automatically at the next program period. You use more energy (and end up paying more on energy bills) if you consistently “hold” or over-ride the pre-programmed settings.
3. Units typically have two types of hold features: (a) hold/permanent/vacation; (b) temporary. Avoid using the hold/permanent/vacation feature to manage day to day temperature settings. “Hold” or “vacation” features are best when you're planning to be away for an extended period. Set this feature at a constant, efficient temperature (i.e. several degrees warmer temperature in summer when cooling, several degrees cooler during winter), when going away for the weekend or on vacation. You'll waste energy and money if you leave the “hold” feature at the comfort setting while you're away.
4. Cranking your unit up to 90 degrees or down to 40 degrees, for example, will not heat or cool your house any faster. Most thermostats begin to heat or cool at a set time, to reach set-point temperatures sometime thereafter. Units with adaptive (smart/intelligent) recovery features are an exception to this rule — Adaptive recovery units are constantly calculating the amount of time required to heat or cool the house, so that it reaches that temperature when the homeowner programmed it. By "examining" the performance of the past few days the thermostat can keep track of the seasons. In this way, your house is always at the comfort levels when occupied, but saving the most energy when unoccupied.
5. Many homes use just one thermostat to control the whole house. If your home has multiple heating or cooling zones, you'll need a programmed setback thermostat for each zone to maximize comfort, convenience and energy savings throughout the house.
6. If your programmable thermostat runs on batteries, don't forget to change the batteries each year. Some units will indicate when batteries must be changed.







## **Electrical Priorities**

### **-Upgrade Lighting to LED Fixtures/Bulbs**

Replace incandescent light bulbs, fluorescent tubes, and even compact fluorescent light bulbs (CFLs) with modern LED lighting technology. LED lighting is far more efficient than the aforementioned lighting options. Additionally, LED lighting lasts longer than its counterparts and produces more stable light. For these reasons, LED lighting improvements often yield maintenance and staffing cost savings in addition to the direct energy use reduction savings. Coupled with powerful rebate incentives offered through local channels and Xcel Energy, LED lighting has become a cost-effective improvement any business should explore pursuing. Give HC3 a call to discuss next steps for a lighting upgrade at your business.

CleaResult may be able to offer free LED upgrades for the track lighting throughout your business. As for the fluorescent tube fixtures in the shop section of the business, we recommend replacing both the fixture and the tubes to modern LED lighting technology. Xcel energy can offer rebates for these retrofits as well. Contact HC3 to connect with one of our local lighting contractors.

















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## Water Conservation Priorities

### **-Upgrade high-use bathroom fixtures with low-flow models**

We recommend replacing high-use fixtures with modern plumbing fixtures required by today's new-construction energy codes. For a bigger impact, consider swapping out older toilets and urinals with modern fixtures that use a fraction of the typical water consumed through the process of flushing. Dual-flush models are also widely available. Also consider installing low-flow showerheads, faucet aerators, and toilet tank bags to reduce water consumption. Fixtures that reduce water consumption where hot-water is often used will result in energy savings to boot.

